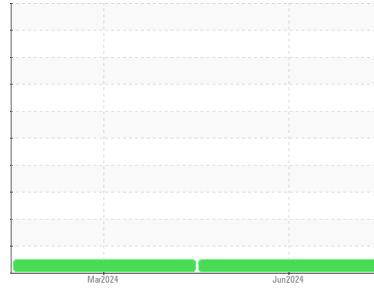




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

EX-401

Component

Diesel Engine

Fluid

CITGO CITGUARD 600 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0909528	WC0909419	---
Sample Date	Client Info			28 Jun 2024	19 Mar 2024	---
Machine Age	hrs	Client Info		4323	3784	---
Oil Age	hrs	Client Info		500	500	---
Oil Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	20	18	---
Chromium	ppm	ASTM D5185m	>20	<1	0	---
Nickel	ppm	ASTM D5185m	>4	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	2	0	---
Lead	ppm	ASTM D5185m	>40	0	0	---
Copper	ppm	ASTM D5185m	>330	5	8	---
Tin	ppm	ASTM D5185m	>15	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	13	0	0	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	57	62	65	---
Manganese	ppm	ASTM D5185m		<1	0	---
Magnesium	ppm	ASTM D5185m	825	955	1037	---
Calcium	ppm	ASTM D5185m	1100	1185	1291	---
Phosphorus	ppm	ASTM D5185m	933	1020	1128	---
Zinc	ppm	ASTM D5185m	1089	1206	1326	---
Sulfur	ppm	ASTM D5185m	2769	3320	3702	---

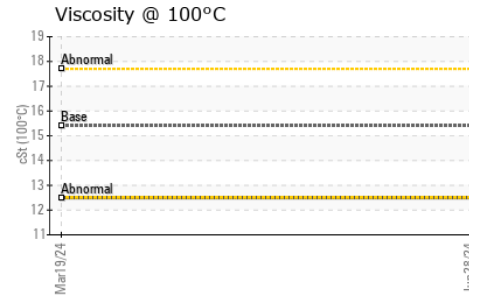
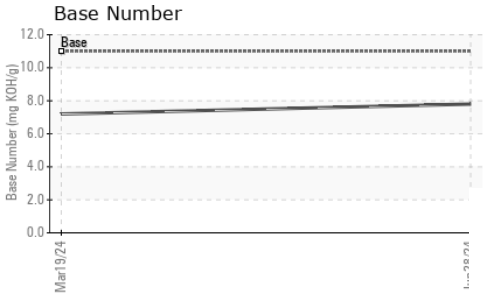
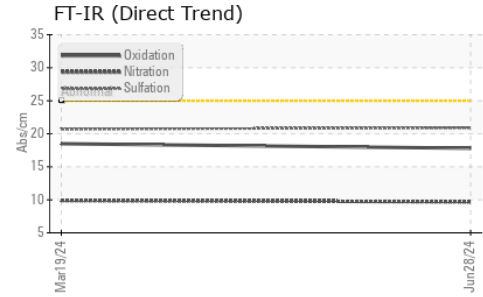
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	3	---
Sodium	ppm	ASTM D5185m		7	4	---
Potassium	ppm	ASTM D5185m	>20	<1	<1	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.3	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	9.7	9.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	20.7	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	18.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	7.8	7.2	---



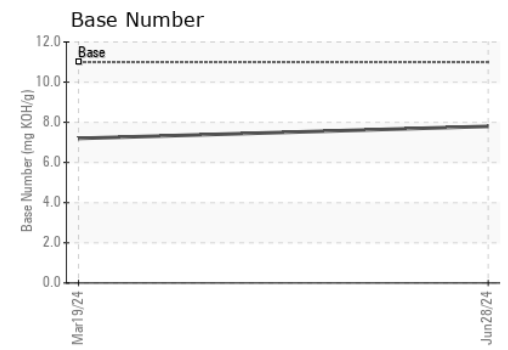
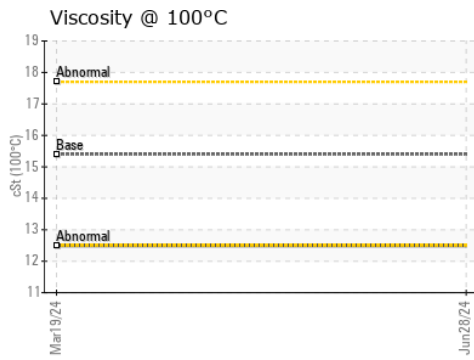
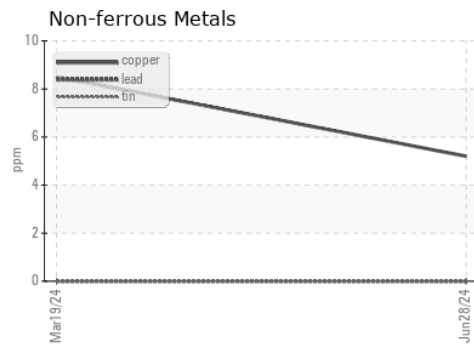
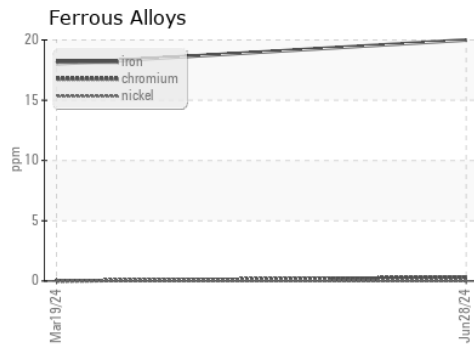
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.5	12.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0909528 **Received** : 15 Jul 2024
Lab Number : 06235511 **Tested** : 15 Jul 2024
Unique Number : 11124345 **Diagnosed** : 15 Jul 2024 - Wes Davis
Test Package : FLEET

E.C. PACE CO.
 1811 HOLLINS RD.
 ROANOKE, VA
 US 24012
 Contact: EDDIE SECO
 ESECO@ECPACE.COM
 T: (276)266-5849
 F: (540)343-6909

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)